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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/319,566	08/09/1999	HANS-JURGEN HANSEN	27656/35739	3274

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23  
EXAMINER

ANGEBRANDT, MARTIN J

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 08/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/319,566

Applicant(s)

HANSEN, HANS-JURGEN

Examiner

Martin J Angebranndt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6,9-15 and 17-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-24,26 and 27 is/are allowed.
- 6) ☒ Claim(s) 1-6,9-15 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. The response provided by the applicant has been read and given careful consideration.

Responses to the arguments offered by the applicant are presented after the first rejection to which they are directed. Rejections of the previous office action not appearing below are withdrawn based upon the amendments and arguments of the applicant. The applicant's arguments are merely unsupported conclusions.

2. **The disclosure is objected to because of the following informalities: The applicant should correct misspellings within the specification, such as "diskussion" on page 11 at line 23.**

**Appropriate correction is required.**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6,10- and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

"st-ates" should read - - states- - (claim 6).

"modula-ting" should read - -modulating- - (cl. 10)

"opti-cal" should read - - optical-- .(cl. 15).

**please correct these and the misspellings described above.**

- 3 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4 Claims 1-6,9,11-14 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable El Houar et al., *Chemia* vol. 50, pp 341 (7/8-1996), in view of Van et al. '561.

El Houar et al., "Synthesis of New Photo- and Thermo-chromic Systems Based upon Cyclic Double Bond Shifts in Heptalenes", *Chemia* vol. 50, pp 341 (7/8-1996) teaches the compounds of formulae 3 and 4 as undergoing double bond shifts in response to light or heat (thermo). This is disclosed as photochromism.

Van et al. '561 teaches that it is old and well known that various photochromic materials can be dispersed in binder resins and used to record information. (1/65-2/9) Useful binders include PMMA, polystyrene and the like. (4/51-55). These recording media are used in computers.

It would have been obvious to one skilled in the art to use materials known to be photochromic, such as those disclosed by Houar et al., *Chemia* vol. 50, pp 341 (7/8-1996) in conventional photochromic recording media where the photochromic dyes are mixed with a binder as this is old and well known based upon the teachings of Van et al. '561.

The applicant argues that there is no direction to use the specific compounds of Houar et al., *Chemia* vol. 50, pp 341 (7/8-1996) in recording media, optical switches, holograms or the like. The rejection is based upon the recognition that the material of Houar et al., *Chemia* vol. 50, pp 341 (7/8-1996) is photochromic and that one of ordinary skill in the art would recognize this as a useful property and not merely a novelty or curiosity. The position that one of ordinary skill in the art would know of particular uses in the prior art for photochromic materials in general is supported by the secondary references Hoysoya et al. '873, Van et al. '561 and/or Caulfield et al., "The Applications of Holography", pp. 30-33 (1970). The applicant has asserted

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that not all photochromic materials are useful for optical recording or the like, but has not presented any evidence concerning any unobvious results achieved when using the materials embraced by the claims. The applicant is directed to the disclosure that the materials of Houar et al., *Chemia* vol. 50, pp 341 (7/8-1996) are photosensitive, thermosensitive and photochromic, which satisfies the requirements for optical recording or the like, particularly in view of the disclosure of the utility of photochromic materials. The rejection and those below stand for these reasons.

5 Claim 1-6,9,12,15 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over El Houar et al., *Chemia* vol. 50, pp 341 (7/8-1996), in view of Hoysoya et al. '873.

Hoysoya et al. '873 teaches that photochromic materials are known to be useful in forming optical switches when dispersed in polymeric binder. Any type of photochromic materials may be used in the switches. These include PMMA, polystyrene and various acrylate resins (6/10-27).

It would have been obvious to one skilled in the art to use materials known to be photochromic, such as those disclosed by Houar et al., *Chemia* vol. 50, pp 341 (7/8-1996) in optical switches using photochromic recording media where the photochromic dyes are mixed with a binder based upon the teaching of Hoysoya et al. '873 that any type of photochromic materials may be used in the switches.

6 Claim 1-6, 9-15 and 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over El Houar et al., *Chemia* vol. 50, pp 341 (7/8-1996), in view of either Hoysoya et al. '873 or Van et al. '561 combined with Caulfield et al., "The Applications of Holography", pp. 30-33 (1970).

Caulfield et al., "The Applications of Holography", pp. 30-33 (1970) teaches that photochromic materials are old and well known to be useful in holographic recording.

It would have been obvious to one skilled in the art to use materials known to be photochromic, such as those disclosed by El Houar et al., *Chemia* vol. 50, pp 341 (7/8-1996) as

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modified by Hoysoya et al. '873 or Van et al. '561 in conventional photochromic holographic media as this is old and well known based upon the teachings of Caulfield et al., "The Applications of Holography", pp. 30-33 (1970).

7 Claims 17-24 and 26-27 are allowable over the prior art based upon the exclusion of specific compounds found in the prior art.

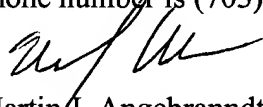
8 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Angebranndt whose telephone number is (703) 308-4397.

I am normally available between 7:30 AM and 5:00 PM, Monday through Thursday and 7:30 AM and 4:00 PM on alternate Fridays.

If repeated attempts to reach me are unsuccessful, my supervisor may be reached at (703) 308-2464.

Facsimile correspondence should be directed to (703) 872-9311.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.



Martin J. Angebranndt  
Primary Examiner, Group 1750  
August 22, 2003